

## Methow Restoration Council

February 20, 2018

### Participants:

Name	Organization/Affiliation
Amy Martin	Okanogan Conservation District
Chris Fisher	Colville Tribes
Gene Shull	USFS
Greer Maier	UCSRB
Jacqueline Wallace	Trout Unlimited
Jarred Johnson	Yakama Nation
Jennifer Molesworth	Bureau of Reclamation
Jessica Goldberg	MSRF
Jocelyn Tutak	Ecotrust
John Crandall	MSRF
Joy Juelson	UCSRB
Kristen Kirkby	CCFEG
Lance George	USFS
Luke Cerise	USFS
Lynda Hofmann	WDFW
Maddie Eckmann	Yakama Nation
Mariah Mayfield	USFS
Melody Kreimes	UCSRB
Paul Wagner	Colville Tribes
Ryan Fortier	WDFW

### Meeting Notes:

**John Crandall – Monitoring Update:** paper of the month is by Joe Benjamin, Ryan Bellmore, and Dan Dombrowski: *Using a Food Web Model to Inform the Design of River Restoration—An Example at the Barkley Bear Segment, Methow River, North-Central Washington*. It is a USGS and Reclamation tag team effort. Results from the ATP model they have been working on for a long time. They ran it at Whitefish Island and Twisp River Floodplain as test sites, and they used the model to predict fish benefit from four habitat restoration alternatives at Barkley Bear. The model looks at energy transfer starting with sunlight and periphyton. Juvenile Chinook and steelhead are the target species, and the fish assemblage they look at include all of the other species. They parameterized the model using real data. An earlier paper came out in 2016 that described the nuts and bolts of the model. They looked at four restoration alternatives at the Barkley Bear habitat project. The results were if you create more perennial side channel habitat you create more fish production. The model is available online now, and it has a relatively easy user interface. It is a decision support tool. For each alternatives, there were hydraulic models to support it; a big piece was how much water there was and where it went.

Discussion – what were the alternatives reviewed, were there historic photos of what Bear Creek looked like before the ditch, Bear Creek was not included in the model runs because there wasn't enough information for the parameterization.

John – for several months I've been talking about the Data Gaps analysis and list with MaDMC. We had a meeting last week that attracted more members to the meeting than to RTT. We refined the list and ended up combining and removing some gaps, so there are fewer now. The list will go out to team for

review and scoring, and then we should have a data gaps list within the month. It will be a living document that can be updated and MaDMC will work on that.

**Joy Juelson – UCSRB Updates:** 2018 SRFB/Trib process. I sent out the 2018 funding announcement last week with key dates. There is a debrief call for last year on March 1<sup>st</sup>; contact Joy for info if you haven't gotten it already. This year's process will have very similar dates to last year, only very subtle tweaks to this year's grant round. Kickoff will be March 14<sup>th</sup> after the RTT meeting. Sponsors will have the opportunity to request informal feedback during the RTT meeting; contact Joy or Tracy to get on the agenda. Then in the afternoon we will have the SRFB kickoff with Marc Duboiski and Tracy Hillman. Project abstracts are due March 31<sup>st</sup>. These will be a paragraph about the projects to help us figure out where we will do the tours and help us give a determination of eligibility. Draft proposals are due April 13<sup>th</sup>. Tours will be May 15<sup>th</sup> and 16<sup>th</sup> in the Methow and Okanogan; Finals. Final proposals due for scoring June 29, due to RCO August 7<sup>th</sup>.

Implementation Team Meeting will be on March 6<sup>th</sup>; it will be a rich meeting. We have a couple of big reports that have come out. Tracy Hillman is going to give a presentation on his work with Phil Roni on Effectiveness of Tributary Habitat Projects. It is a good look at what kinds of actions have been implemented. The ISAB report on Spring Chinook Salmon in the Upper Columbia River is also out, with key findings and recommendations. We will have a discussion on how this will be integrated into our recovery strategy in the UC. Greer will give the Hatchery Background and Summary overview, and we will also go over funding opportunities.

Melody – we have also invited a rep from the ISAB to come to our March 15<sup>th</sup> board meeting at Douglas County PUD in the morning that will be a good opportunity.

Joy – we had an RFP for outreach grants in Okanogan County. We have made some decisions and we are excited that there is funding for outreach. 2-3 programs will be funded.

Melody – also for our March 15<sup>th</sup> board meeting we will have a discussion with the PUDs and USFWS and NOAA to start a discussion about how hatchery decisions are made and see how that fits in with our recovery goals. I am also preparing for the annual trip to DC to talk to folks about the PCSRF funding

Chris Fisher – how much is there for outreach?

Melody – we have \$27,000 to split between the counties, we hope to get to \$20,000 per county.

John – we have done watershed watchers, salmon in and out of the classroom, river signage

Kristen – education, films, brochures, videos, etc.

Joy – we've had a solicitation for the last three years in collaboration with the county, the board issues the solicitation and we work with the counties.

Chris – the Conservation District has a quarterly report/newsletter, and there seems like there is an opportunity to highlight a salmon recovery project in the newsletter quarterly. An opportunity that shouldn't be missed, to use an existing vehicle.

Joy – there has definitely been a push from RCO due to the color of money used; they have wanted to see more projects that are more directly related to implementation. We hope to continue to do the fish in the classroom. So far we have been able to stay flexible. No time extensions this year.

**John Crandall – Assessment Units Update:** as you will recall the RTT is updating the Biological Strategy, which is an important document for recovery planning in the UC. There has been an effort to revise the Assessment Units to make them more specific, smaller, so that Ecological Concerns can be more specifically targeted for restoration. You lose detail when you lump. This effort has some basis in how Okanogan has been using the EDT model they used for the most part HUC 12 watersheds, and there has been an effort to standardize them across the Upper Columbia. For this revision the RTT wanted to get more detail. We've taken the HUC 12s and thrown them on the Methow. We had a discussion at an RTT meeting a few months back, that some of these HUC 12s contain mainstem river. There has been

an effort to separate out the mainstem reaches as their own Assessment Units. They are very different than the tributaries that are dumping into them, and have very different data collection. The mainstem has been broken out, and an MRC group went through and broke them up and gave them to the RTT. The message was to split rather than to lump. A few small creeks got broken out –Reynolds Creek, Poorman Creek on the Twisp River, and Frazer Creek has also been carved out because there is a lot of data. We have a lot more Assessment Units now. You can always lump later, but RTT wanted to keep the detail for now.

Kristen – is the same methodology of breaking out the mainstem going to be applied to the Wenatchee?

John – yes, the Methow, Wenatchee, and Entiat are going this route. Okanogan is lacking this detail and there is some thought to going back to the Okanogan and doing that.

Kristen – what about the tributary mouths at the mainstem?

John – how we buffer those is a work in progress, a one size fits all may not be perfect. If anyone has any comments send them to the RTT/Tracy Hillman.

### **Melody Kreimes and Jocelyn Tutak –Snowpack Decision Support Tool**

Melody – two years ago we had a distributed soil veg model funded by the department of Ecology. The results were pretty promising, consistent with the literature, that 2-4 cfs could be generated from increased snowpack due to forest restoration. We worked on getting realistic restoration scenarios, and with those results Ecology funded us for another year to develop a tool that people could use to look at the relationship between forest restoration actions and snowpack.

Jocelyn – I work for the analytical arm of Ecotrust, with a focus on stakeholder engagement, economic analysis, and decision support tools. We hope to have a beta out mid-month in March. If you are interested in what the tool does we would love to have you help us test. We do want feedback to make sure the tool is usable and helpful.

The goal of the tool is to allow users to explore the effects of forest management (prescriptions and treatment locations) on snowpack and resulting stream flows.

Process is the backend (data and modeling) and the front end (user workshops and objectives); these come together on the tool development. We have identified two user objectives: 1) how do I increase flow at a given location on the landscape, and 2) how do my forest management processes impact downstream flow.

The Phase I model was designed to evaluate effects of vegetation and vegetation change on the hydrological cycle at spatial scales that are relevant for forest management practices. Chiwawa, Upper Entiat, and Upper Methow were considered in the Phase I model.

Discussion – year long modeling scenario, truncated at 12 years because that is the regrowth cycle; does not model regrowth; removing vegetation leads to gains in snowpack, but at some point you get more evaporation, smaller openings that allows the snow to get to the ground; at what point does it change from a linear relationship to a non-linear relationship, the report on the model is on the UCSRB website and UCSRB will send to Jessica to distribute.

Jocelyn – it depends on where the activity takes place and what time of year you want to see the effect

Discussion – differences in locations, climate change; model does not go to 100% treatment (clear cut)

Jocelyn – the tool is designed to help managers use the model, and expose the modeling process for the end user. Different scenarios have very different results for different areas. Model takes into consideration flow, which is a function of Watershed characteristics, land type characteristics, and meteorological conditions

User Interface: landing page, terms, tutorial, potential to sign in if you want to save your work (will be free). Three potential ways to interact with the tool; select a stream segment (how is it affected by

upstream management) (stream data comes from Streamnet), select a stream reach along the segment, and you can filter the upstream area that you are interested in. Many filters are available. Currently the tool is built to go anywhere where the model exists, but we hope to expand the areas. Veg layers are the layers that went into the PNNL model, so they haven't been updated yet (post-fire).

Discussion – filters, a lot of the areas are wilderness or Roadless in the Upper Methow, so can't be treated

Jocelyn – flows available, can click through results, get acres of types of landform, topography

Chris – can you ask the question backwards – start with a percent of streamflow increase desired to have it tell you how much clearing you have to do?

Jocelyn – I would have to check on that, but it would be good for us to know if that is how you work. For these tools, they require a human brain to manage how you use them. It is meant as a tool to help get to some answers and then have people who are knowledgeable about the landscape to help decide what should happen out on the land.

Gene Shull – is there variation in the types of treatments?

Melody – the restoration strategies were developed by Paul Hessberg based on the Restoration Strategies in the Okanogan Wenatchee National Forest; based on fractional canopy cover being opened up

Gene – so it is all overstory treatment, not understory treatment

Melody – there were also fire scenarios, and that can be 100%. I would have to look back at the report

Lance George – is one of the filters practicalities, like if the treatment would need to build a lot of roads?

Jocelyn – you can filter for distance from roads, so if you want to minimize impacts from roads you can do that by limiting distance to roads

John – so for right now this is only for the Upper Methow? Or is it also available in areas where we might be working?

Jocelyn – currently the tool is just for those watersheds that the original model covered, but we are working to expand the areas that are covered

John – who is the target audience for the model?

Melody – the intent is that it can be used in areas where the model wasn't run. Our hope is that when you see the report you can familiarize yourself with the background and have people beta test it and let us know how we can make it more useful. We would love it if the Forest Service would use it but we hope that it would be used by everybody.

Jennifer Molesworth – it seems like the treatment areas would have to be so big in order to affect streamflow

Discussion – treatment changes shown in the Methow on the sample graph were small, most of the watershed is public, so the Forest Service would have to participate in order to make a difference

Chris – there are some bugs that need to be worked out, but the reality is that we have an area that has been mismanaged for a long time. Historically there were fires every 10-15 years

Jennifer – in a lot of the wilderness areas the fire return intervals is longer, but it is true that fire suppression has affected the mosaic

Chris – and we may need to use forest management/timber harvest to get us back to more historic intervals. There are opportunities here that we could do that could be very significant, not just in the Upper Columbia, but region wide and beyond. We need to think about the benefits we could get to streamflow from management actions

Gene – I work with watersheds and managing vegetation, and we understand that we have a subbasin that is out of whack with fire; that is very clear. Managing vegetation is a tool and can be a surrogate for fire, but managing vegetation is very complex, a lot of nuances about how you can get the wood out of the watershed. Removing the overstory is commercial logging, and there are a lot of adverse effects

from soil disturbance, roads, etc., and we need to fix our roads, but we have no funding. We need to look at the roads and the vegetation.

Jennifer – the other thing is the cost to pay for the logging

Chris – but how much money do we spend on fire suppression?

Jennifer – it's about \$1 Million per day

John – the underlying data that goes into the tool needs to be updated every year, because there are prescribed fires every year

Melody – I'm really glad to have the FS here; we wanted to have more engagement with the FS, but it is not intended to be a prescriptive tool for them. It is more about understanding where there is potential to increase stream flows in areas where you might be working anyway.

Jocelyn – the next steps are about identifying places on the landscape where people are doing restoration.

Discussion – current FS treatments, stewardship, altered fire regime due to past practices, need to change the vegetation to get back to a more normal fire frequency. It takes a lot of time and money to do the timber sales, and there is a current ongoing prescribed fire program. People need to read the report to get the details behind the model

Joy – this can potentially help sponsors work with the landowners, identify projects, and get funding,

Melody – it can be used by anybody who would like to look at the relationship between flows and restoration

Chris – there is an opportunity to talk to landowners about fire wise opportunities, to make it a benefit to them that also benefits stream hydrology

John – the size of the effort would make it hard here, the ability to move the points around would be critical, and the ability to draw your own treatment areas

Gene – would be good to beta test it with the Mission Project, 20% is overstory, 80% is the understory

John – Mission would be a good test case for this, to run all of the treatments proposed

Jocelyn – plan management filter results across the areas where you want to work. You can exclude roadless areas, private lands, critical areas, forest class, slopes, etc. You can then go in and draw/select a treatment area, get a summary of acres, area make up in terms of forest type, height, etc.

Lynda – can you model the effects of actual fires, like if you have the data for the Diamond Creek fire and model expected streamflow from that?

Gene – we have burn severity maps

Lance – the BAER team has also modeled the expected runoff

Discussion – would be interesting to compare the model and the BAER report

Jocelyn – we've gone through the wireframes, hope to release the BETA mid-March and get feedback from people; we are hopeful that we will have expanded the model to other areas by then but not certain.

To contact us about the tool: I'm at [jtutak@ecotrust.org](mailto:jtutak@ecotrust.org), Mike Mertens [mike@ecotrust.org](mailto:mike@ecotrust.org) is the one who knows more about how the model was built into the tool

Lance – the Upper Methow is the area where we have the fewest opportunities to do management, so it is hard to understand why the model was built there

Melody – that area had the meteorological data and other data long-term data

Jocelyn – the tool will be open source, and available

Gene – would be great to have a further discussion where we get into the weeds; we need to be able to understand a lot more to be able to make a decision.

## **Roundtable/Public Comment**

*Melody Kreimes* – UCSR: the role of the NCW Forest Health Collaborative is that we help facilitate. Thinking about the intent of the collaborative is to try to get to the idea of whole watershed

conservation. That timber harvest is a viable source of funding to get that work done. We hear that from industry stewardship contracting for commercial harvest to help pay for roads, culverts, other treatments etc.

Gene – it helps, but it never pays for everything.

Melody – we're thinking about helping with the capacity work to try to help get that done.

*Maddie Eckmann – Yakama Nation:* We're getting ready for construction season this year. We will be putting in a culvert at the Twisp Horseshoe site, working with the US ACOE SPIF for ESA. We're looking at the Red Shirt mill area, and looking to draft a memo at Ecology to work with us to clean up the project area. At Alder Creek were looking at the survey data we compiled this summer, looking at the WDFW property down there. At the Beaver Ponds Twisp to Carlton project area, doing outreach and hoping to collect some additional topo and bathymetry data

*John Crandall – Methow Monitoring:* We're moving along with the Lower Methow Reach Assessment; it will be a 28 mile reach of stream because there is no geomorphic basis to break it into subreaches.

However we will break out project areas based on degree of lateral confinement; most areas are fairly well confined. That process is moving forward with a target end date of the end of 2019.

Outreach: I'm currently updating the annual MRC outreach and education template, so if you are doing anything please send it to me ASAP. We will convene a meeting of the outreach and education folks soon, so if interested contact John

*Gene Shull – USFS:* we're nearing completion of the planning process for Mission and hoping to have a NEPA decision by the end of June; after that then hope to move forward with implementation. The Twisp River is our next project. We have to implement too, or the planning doesn't matter, and we are hoping to have partners for implementation on the Twisp

We have ERFO – which is funding we get for forest service roads damaged by storm events, but some were not up to standards. We hope to put some ERFO \$ to reroute Volstead, and we're looking for partners for decommissioning; hoping to gain some momentum for that

Lance – we nipped the idea of replacing it in place in the bud, and we are working on the reroute. ERFO will pay for upper crossing and reroute, but it may or may not have funding for the decommissioning. These are federal highway dollars

Gene – we hope to have it done by the end of 2019, but we don't have any funding to do anything now, unless we have some partners. This process could fund the whole thing but have been told it would be good to secure some partner funding, maybe around \$100k

Chris – what do you mean by decommissioning?

Gene- a full decom, full removal

Lance – we would also put a lot of wood into the channel, and may need extra money for that part

Jennifer – if you had money could you decommission now?

Gene – no; decommissioning a maintenance level 2 road needs a NEPA decision

Lance – there is some question is whether you need it to do a road that doesn't exist anymore, but I still think the answer is yes.

Chris – if you got the money today could you do the project this summer?

Lance – no

Discussion – whether it could be considered an emergency, risk to private land, irrigation, county road, definite impacts, why NEPA would take so long, partial stabilization and decom later

Gene – I will ask whether there is any way we could do some restoration piece if money were no object

Lance – it's so blown out right now then it's better to leave it rather than make it worse

Mariah Mayfield – that's what Jennifer Bountry said, that the road is decommissioning itself right now

Lance – it's still going to release sediment after it's decommissioned

Gene – we might need some help with this for implementation in 2019; we do believe that fixing this road is going to be good for fish

Gene – we will be doing the Chewuch restoration Phase 2 River Mile 17-20 with YN this summer. From an aquatic standpoint, one of our #1 restoration priorities is getting rid of unneeded roads, some barrier culverts, and we are struggling to get funding to decommission and reduce roads, and that is a benefit to the watershed

Chris – they are Forest Service roads, the responsibility of the federal government

Gene – I agree, but the reality is that we don't have funding for it. We are trying to be creative but things like stewardship \$ only go so far. The one process that we do have is the legacy roads and trails program, but it is tied to our priority watershed. Currently Eightmile Creek is our priority subwatershed, and we are kicking money there for roads, but that money isn't available for other areas. Conservation NW has been one of our bigger partners, and we are working on creating ways to decom roads that are lower cost.

*Kristen Kirkby – CCFEG:* we are working on 30% design for Burns Garrity, and hope final design by the end of the year and construct next year. We hope to put out an RFP in cooperation with MSRF and CTCR for design for some work in the Twisp to Carlton

I'm working with FFFPP on a barrier culvert on Benson Creek

Rob Crandall and I have a bunch of school visits in Pateros and Okanogan getting into high school classes to talk about fish biology, riparian, etc.

Working with Outreach funds

We are in the hiring process for technicians for the barrier assessment in the Methow, crew of 2 or 4 surveying all summer long

*Amy Martin – Okanogan Conservation District:* We will be using Ecology capital funds and will be working with Benson Creek water users, about improving water availability, instream sediment

*Jarred Johnson – Yakama Nation:* still working on several different projects – a bridge project with DOT and Allan Acord on Beaver Creek, things are moving on Fawn Creek, Upper Beaver Creek projects. Also working on a number of acquisitions

*Joy Juelson – UCSRB:* regarding the science conference, all the presentations are online now, a great resource

*Paul Wagner – Colville Tribes:* I just finished a Contract Change Request to BPA to add funds from last project year to current year for the beaver project and for some outreach work for Kristin and Rob, and for some acquisitions. Next contract I'm working on Maltais production well and a hydrologic continuity study on Beaver Creek. We have taken a lead role in the beaver project benefit study, and we've been working with Lynda to talk about coordinating some BDA work with Beaver relocations in Methow and perhaps in the Okanogan. Also working with Aaron at TU to purchase 8 miles of pipe for the Barkley irrigation project.

**Next MRC March 20, 2018**

<b>Definitions of Commonly used Acronyms</b>	
AEM	Action Effectiveness Monitoring
ANS	Aquatic Nuisance Species
AREMP	Aquatic and Riparian Effectiveness Monitoring Program
AU	Assessment Unit
BACI	Before, After, Control, Impact (study design type)
BDA	Beaver Dam Analogue
BEF	Bonneville Environmental Foundation
BO/BiOp	Biological Opinion
BPA	Bonneville Power Administration
CAC	Citizens Advisory Committee (for SRFB funding applications)
CAO	Critical Areas Ordinance
CBFWA	Columbia Basin Fish and Wildlife Authority (pronounced “cubfwah”)
CCFEG	Columbia Cascade Fisheries Enhancement Group
CCT	Colville Confederated Tribes (newer acronym is CTCR – see below)
CTCR	Confederated Tribes of the Colville Reservation (older acronym is CCT – see above)
CHaMP	Columbia Habitat Monitoring Program
CMZ	Channel Migration Zone
CREP	Conservation Reserve Enhancement Program
CSF	Community Salmon Fund
DEM	Digital Elevation Model
EDT	Ecosystem Diagnosis and Treatment
EQIP	Environmental Quality Incentives Program
ESA	Endangered Species Act
FCRPS	Federal Columbia River Power System
FFFPP	Family Forest Fish Passage Program
FIA	Forest Inventory and Analysis program (USFS)
Four “H”s	The four factors affecting salmon recovery: Hatchery, Hydro, Habitat, Harvest
HACCP	Hazard Analysis and Critical Control Point
HGMP	Hatchery Genetic Management Plan
HPA	Hydraulic Project Approval
HSRG	Hatchery Scientific Review Group
HWS	Habitat Work Schedule
IMW	Intensively Monitored Watershed
IS	Implementation Schedule
ISAB	Independent Science Advisory Board
ISEMP	Integrated Status and Effectiveness Monitoring Project
ISRP	Independent Scientific Review Panel (reviews BPA projects)
IT	Implementation Team
LW/LWD	Large Wood/Large Woody Debris
M2	Middle Methow (a project area defined as the reach between Winthrop and Twisp)
MaDMC	Monitoring and Data Management Committee (pronounced “madmac”)
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRC	Methow Restoration Council
MSRF	Methow Salmon Recovery Foundation (pronounced “em-surf”)
MVRD	Methow Valley Ranger District

MWC	Methow Watershed Council
NFF	National Forest Foundation
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPCC	Northwest Power and Conservation Council
OCD	Okanogan Conservation District
OBMEP	Okanogan Basin Monitoring and Evaluation Program
OWL	Okanogan Wilderness League
PCSRF	Pacific Coastal Salmon Recovery Fund (pronounced "Pacsurf")
PHABSIM	Physical Habitat Simulation
PIBO	PACFISH/INFISH* Biological Opinion
PNAMP	Pacific Northwest Aquatic Monitoring Partnership
PUD	Public Utility District
QAQC	Quality Assurance, Quality Control
RA	Reach Assessment
RCO	(Washington State) Recreation and Conservation Office
REI	Reach-based Ecosystem Indicators (used in Reach Assessments)
RFEG	Regional Fisheries Enhancement Group
RFP	Request for Proposals
RM	River Mile
RPA	Reasonable and Prudent Alternative(s)
RTT	Regional Technical Team
SEPA	State Environmental Policy Act
SMP	Shoreline Management Plan
Snerd	Fish Capture-Snorkel Herding
SOAL	State Owned Aquatic Lands
SOW	Statement of Work
SPIF	Specific Project Information Form (used with the Corps ESA programmatic)
SRFB	(Washington State) Salmon Recovery Funding Board (pronounced "surfboard")
SRP	State Review Panel (for SRFB funding applications)
STEM Database	Status, Trend and Effectiveness Monitoring database at NOAA's Northwest Fisheries Science Center
UCSRB	Upper Columbia Salmon Recovery Board
TRT	Technical Recovery Team (NOAA)
USFS	US Forest Service
USGS	US Geological Survey
VSP	Viable Salmonid Population
WAT	Watershed Action Team (the MRC is our WAT)
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
WNFH	Winthrop National Fish Hatchery
WWP-TU	Washington Water Project of Trout Unlimited
YN	Yakama Nation

\*PACFISH/INFISH The PACFISH/INFISH Biological Opinion (PIBO) Effectiveness Monitoring Program was initiated in 1998 to provide a consistent framework for monitoring aquatic and riparian resources on most Forest Service and Bureau of Land Management lands within the Upper Columbia River Basin.